

WHAT IS CLAIMED IS:

1. A piston machine, comprising a cylindrical wall (2) defining a swept volume (1) and having a plurality of gas inlet openings (5); a gas outlet valve (7); and a piston (3) reciprocating in the swept volume (1) and having a piston head (12),

wherein the piston head (12) is formed as a valve having a plurality of openings (14) provided in the piston head (12), and a forcelocking device (16, 21; 18, 24) for retaining the plurality of openings (14) in one of open condition and closed condition thereof, dependent on the gas flow through the forcelocking means.

2. A piston machine according to claim 1, wherein the forcelocking device comprises a diaphragm (16) for closing the plurality of the openings and formed of a plastic material interspersed with magnetic particles, and magnetic means (21, 22).

3. A piston machine according to claim 1, wherein the
forcelocking device comprises a magnetic plastic diaphragm (18) for closing
the plurality of the openings and a metal plate (24).

4. A piston machine according to claim 2, wherein the
magnetic means (21) comprises an annular permanent magnet (21) arranged in
an annular groove (20) formed in the piston head (12).

5. A piston machine according to claim 2, wherein the
magnetic means (22) comprises a plurality of segment-shaped permanent
magnets arranged in an annular groove (20) formed in the piston head (12).